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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,028	09/29/2005	Rafael Wiemker	DE 030098	8236
24737	7590	02/25/2009	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS			KIM, CHONO R	
P.O. BOX 3001			ART UNIT	PAPER NUMBER
BRIARCLIFF MANOR, NY 10510			2624	
MAIL DATE		DELIVERY MODE		
02/25/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,028	<b>Applicant(s)</b> WIEMKER ET AL.
	<b>Examiner</b> CHARLES KIM	<b>Art Unit</b> 2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6,9 and 10 is/are rejected.
- 7) Claim(s) 7 and 8 is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 September 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1468)  
 Paper No(s)/Mail Date 7/13/07,929/05
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The specification is objected to due to a lack of section headings. Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim(s) 1-5 is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Federal Circuit precedent requires that a statutory “process” under 35 U.S.C. 101 must “(1) be tied to a particular machine or apparatus, or (2) transform a particular article into a different state or thing.”<sup>1</sup> This is called the “machine-or-transformation” test. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform a particular article nor are positively tied to a particular machine or apparatus that accomplishes the claimed method steps. Thus, the claim(s) do not embody statutory subject matter because they fail to satisfy the machine-or-transformation test.

3. Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Computer programs not embodied in computer-readable media are considered functional descriptive material per se and are therefore, not statutory. A statutory product comprising functional descriptive material must include a positive recitation of a computer readable medium -- MPEP 2106.01.

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<sup>1</sup> *In re Bilski*, 88 USPQ2d 1385, 1391 (Fed. Cir. 2008).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5, 6, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the article entitled "Automatic segmentation of the colon for virtual colonoscopy" by Wyatt et al. (hereinafter "Wyatt") and Vining et al., U.S. Patent No. 6,366,800 (hereinafter "Vining").

Referring to claim 1, Wyatt discloses a method for determining a volume of an object from three-dimensional volume data including graphic information units, comprising:

determining a volume of interest including the object [section 3. Note that the volume of interest is segmented.];

determining a threshold of the graphic information units in the volume of interest [section 3.3. Note that the image data is thresholded.];

performing a distance transform on the basis of the thresholds for determining a distance map consisting of voxels [section 3.3. Note that a distance transform is applied to the thresholded voxels.];

providing a seed point (seed candidate) in the distance map, which seed point is on the object [section 3.3];

determining a number of core-voxels and a number of front-voxels by using the seed point [section 3.1. Note the region growing process determines a number of core-voxels (region voxels) and front-voxels (non-region voxels).]; and

determining the volume of the object on the basis of the number of core-voxels and the number of front-voxels [sections 3.1-3.5].

Wyatt does not disclose using multiple thresholds. However, this feature was well known in the art. For example, Vining discloses using multiple thresholds for segmenting a volume of an object from three-dimensional volume data [col. 5, l. 62-col. 6, l. 11. Note that adaptive thresholding is used.].

Wyatt and Vining are combinable because they are both concerned with processing three-dimensional volume data in the field of medical imaging. Adding Vining's multiple thresholds to Wyatt's segmentation process would have provided the predictable benefit of enhancing the accuracy of the volume segmentation process [Vining, col. 5, l. 62-col. 6, l. 11]. Therefore, it would have been obvious to modify Wyatt in view of Vining, in order to obtain the invention as specified in claim 1.

Referring to claim 5, Wyatt further discloses that the object comprises a vessel (colon) and the graphic information units correspond to Houndsfield units [section 1.]

Referring to claim 6, see the rejection of at least claim 1 above. Wyatt further discloses an image processing device [section 4. Note the MIPS R10000 processor.] with corresponding components for performing the method recited in claim 1.

Referring to claim 9, Wyatt further discloses a computer aided tumor volumetric measuring device for computer aided volumetric measurements on the basis of computed tomography (CT) image scans [section 1].

Referring to claim 10, see the rejection of at least claim 1 above.

***Allowable Subject Matter***

5. Claims 7-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 571-272-7421. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri 9:30am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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February 20, 2009